Google

<model-viewer> Fidelity Testing

Chris Joel
github.com/cdata
twitter.com/0xcda7a
<model-viewer src="DamagedHelmet.gltf">

github.com/GoogleWebComponents/model-viewer
HARD PROBLEMS

#2: Cache Invalidation
#1: Predictable Model Renders
PROBLEM AREAS

Incorrect interpretations
Inconsistent opinions
Unpredictable fallbacks
Automate it!
Filament golden image

<model-viewer> reproduction
Boolean match

Color distance
Select two images to compare them!
Test Khronos glTF Sample Models!
16bpc PNG support
Status: fixed
[google/filament#835](https://github.com/google/filament/issues/835)
Normal Tangents

Status: fixed

[Link to issue on GitHub](google/filament#847)
Unlit Material
Status: fixed
model-viewer#377
Alpha Blending
Status: fixed
model-viewer#423
Emissive Status: fixed

[Link to issue on google/filament#865]
PROGRESS REPORT

Was it worth it?
Muted emissive
Specular highlight
\(\angle 180^\circ\) env map rotation
Directional light radius
Muted emissive
<model-viewer>

Filament

Threshold 10
LIVE TEST RESULTS

googlewebcomponents.github.io/model-viewer/test/fidelity/results-viewer.html
FUTURE WORK

Khronos WebGL Reference Viewer
Solution for iOS Quick Look
Interactive Progress Report Dashboard
Standalone Fidelity Testing Effort
Thank you!

THE END